Meteor New Light on The Black Death - The Viral and Cosmic Connection

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07 May 2011
The Dot Connector Magazine

from Sott Website

This article was first published in issue 13, volume 1/2011 of The Dot Connector Magazine, official publication of Sott.net

> "Comets are vile stars. Every time they appear in the south, they wipe out the old and establish the new. Fish grow sick, crops fail, Emperors and common people die, and men go to war. The people hate life and don't even want to speak of it."

> **-Li Ch'un Feng, Director, Chinese Imperial Astronomical Bureau, 648, A.D.**

In 2007, a meteorite fell in Puno, Southeastern Perú.

José Macharé - scientist of the Geologic, Mining and Metallurgic Institute in Perú - said that the space rock fell near a muddy area by Lake Titicaca, making the water boil for around ten minutes, and mixing with the soil and emanating a gray cloud, the components of which remain unknown.

Having discarded radioactive poisons, this toxic cloud is said to have caused headaches and respiratory problems in at least 200 persons from a population of 1500 inhabitants.

Other than this event,

> - How often do we hear about people getting sick

> due to a rock coming from space?
>
> - How about birds, fish or other animals?
> - Ancient astrologers cite comets as ill omens of death and famine, but are there any other causes other than the ones due to physical/mechanical consequences of comet impact devastation in our fragile environment of which we should be aware?

As a physician, I usually concentrate strictly on medical and health-related issues, not history or catastrophism.

However, like so many other people, I see signs of atmospheric changes on our planet which, according to many experts, may well be due to increasing comet dust loading.

When I read about increasing reports of fireballs all around the world, and I know that these factors must have an effect on the health of individuals and societies, it motivates me to do the research to find the connections so that I am better prepared for what may lie in our future. If our planet is entering a new cometary bombardment cycle, and if these comets harbor new species of microbes unknown to mankind's collective immunological systems (as may well be the case), then being forewarned is being forearmed.

According to the late Sir **Fred Hoyle** and **Chandra**

Wickramasinghe of the University of Wales at Cardiff, viruses can be distributed throughout space by dust in the debris stream of comets.

Then as Earth passes though the stream, the dust and viruses load our atmosphere, where they can stay suspended for years until gravity pulls them down. They compare numerous plagues throughout our history which coincide with cometary bodies in our skies. These researchers are certain that germs causing plagues and epidemics come from space.

In a letter to Lancet [1],Wickramasinghe explains that a small amount of a virus introduced into the stratosphere could make a first tentative fallout east of the great mountain range of the Himalayas, where the stratosphere is thinnest, followed by sporadic deposits in neighboring areas.

Could this explain why new strains of the influenza virus that are capable of engendering epidemics, and which are caused by radical genetic mutations, usually originate in Asia?

Wickramasinghe argues that if the virus is only minimally infective, the subsequent course of its global progress will depend on stratospheric transport and mixing, leading to a fallout continuing seasonally over a few years; even if all reasonable attempts are made to contain an infective spread, the appearance of new foci almost

anywhere is a possibility.

Mainstream science scoffs at the idea that if there is life such as bacteria and viruses in space, some of it would naturally fall to Earth. While some researchers agree that comet dust may harbor organic matter, they argue that even if the dust did reach Earth's atmosphere, a fiery entry would make all organic matter's survival questionable.

But in a study published in the journal *Meteoritics and Planetary Science* [2], it is detailed that amino acids - the building blocks of life - were found in a meteorite where none were expected.

Why? Because this particular meteorite formed when two asteroids collided, the shock of collision heating it to more than 2,000 degrees Fahrenheit - hot enough that all complex organic molecules like amino acids should have been destroyed.

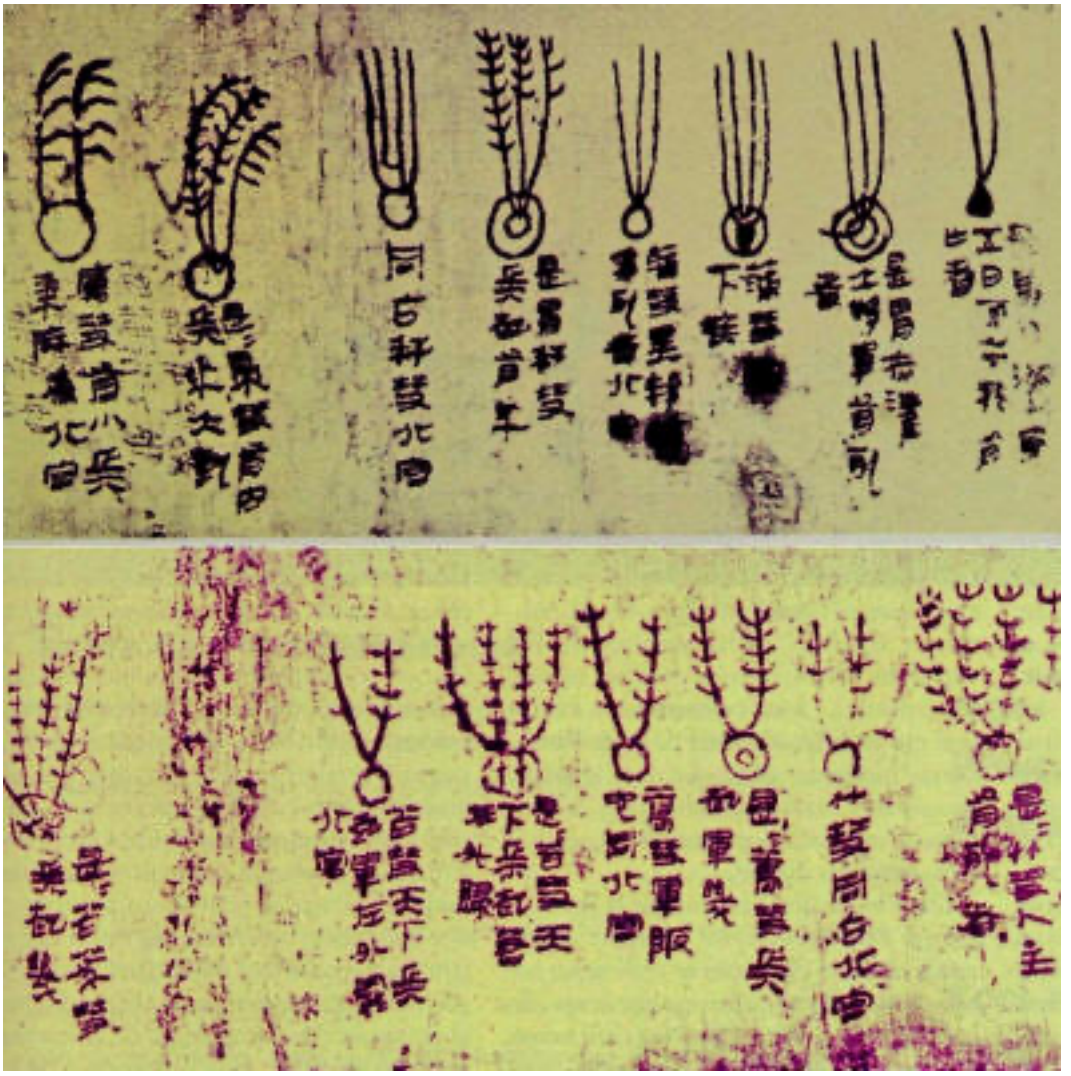
They found them anyway, and their study cites the possibility of sample contamination being highly unlikely. In addition to amino acids, they found minerals that only form under high temperatures, indicating that they were indeed forged in a violent collision.

Jennifer Blank of SETI has done experiments with amino acids in water and ice, showing they can survive pressures and temperatures comparable to a low-angle

comet-Earth impact or asteroid-asteroid collision.

Rhawn Joseph, Ph.D., co-authoring researcher with Wickramasinghe in the book Biology Cosmology, Astrobiology, and the Origins and Evolution of Life [3], tells us:

> Ancient Chinese astronomers chronicled numerous episodes where comets preceded plague and disaster. Meticulous observations were compiled in 300 B.C. in a textbook known as the "Mawangdui Silk." It details 29 different cometary forms and the various disasters associated with them, dating as far back as 1500 B.C.



> **The Mawangdui silk, depicted 29 different cometary forms**
>
> **and the various diseases and disasters associated with them.**
>
> **Compiled, beginning around 1500 BC.**

Joseph points out that medieval Europe and colonial America are areas where comets were observed to coincide with plagues and disease, adding that Comet Encke, the likely origin of the Tunguska impactor and the 1918 Flu epidemic, also coincide.

He writes:

> ... in 2005, scientists from the Armed Forces Institute of Pathology in Washington, D.C., resurrected the 1918 virus from bodies that had been preserved in the permanently frozen soil of Alaska.
>
> They soon discovered that *a completely new virus* had combined with an old virus, exchanging and recombining genes, creating a hybrid that transformed mild strains of the flu virus into forms far more deadly and pathogenic.
>
> They also confirmed that the 1918 Spanish flu virus originated in the sky, first infecting birds and then spreading and proliferating in humans.

Joseph argues that cometary debris, and the smaller

particles and any microbes and viral particles attached to cometary debris impacting earth, fall upon the upper atmosphere and then slowly drift upon the air currents, sometimes staying aloft for years, crisscrossing the planet and gently falling downward, until finally making a soft landing on whatever is beneath them - be it ocean, river, animal, plant, or woman and man.

In fact, it is known that microorganisms exist in significant concentrations in Earth's atmosphere, and they have been found in air samples collected at heights ranging from 41 km to 77 km. The natural mechanisms which transport microorganisms into the atmosphere are storms, volcanoes, monsoons, and cometary impact events.

We know that the Tunguska object exploded in the atmosphere in June 1908, but it was not until 1927 when scientists finally made it to the impact area in Siberia. No visible fragments of the exploded body were found, but later fieldwork uncovered peculiar black, shiny, metallic spheres in the soil of numerous small, shallow, oval craters - 50 to 200 meters in diameter - similar to the craters of the Carolina Bays.

These spheres were typical of extraterrestrial bodies having a composition very high in iridium, nickel, cobalt and other metals, and an unusually high content of these same metals were later found in Antarctic ice cores - but in the layer relating to the year 1912. [4]

That is to say, it took four years for these metals deposited in the stratosphere to precipitate onto Earth.

Was the Tunguska object a source of new strains of virus never seen before on Earth?

A study conducted near the Tunguska Phenomenon site found significant concentrations of culturable microorganisms in the skies of southwestern Siberia, at an altitude range of 0.5-7 km, a range similar to the height of 5-10 km where the Tunguska Space Body interacted with Earth's atmosphere. [5]

Joseph reminds us that microbes which flourish in the cold are this planet's most successful colonizers.

In fact, they are perfectly adapted to a life on some frozen astral object traveling through space.

> "The long-term impact of subzero temperatures should be regarded not as extreme and limiting but rather as a stabilizing factor supporting the viability of microorganisms".
>
> **(D. A. Gilichinsky, "Permafrost Model of Extraterrestrial Habitat" in G. Horneck & C. Baumstark-Khan, Astrobiology, Springer, 2002)**

Supporting this, it is known that **Richard Hoover** of NASA discovered microorganisms in deep ancient ice cores over 4,000 years old, drilled from Lake Vostok, near

the South Pole.

These creatures were found in association with ancient cosmic dust particles which had fallen from space. Moreover, microbes recovered from Lake Vostok increase in number with increasing numbers of dust particles (S. Abyzov et al., Microbiologiya, 1998, 67: 547).[3]

Joseph and Wickramasinghe have also reviewed and provided evidence that *microbes can travel from planet to planet and solar system to solar system* encased in asteroids, comets and other stellar debris, and that they can survive the impact and heat of ejection and reentry into the atmosphere.

This is the so-called Panspermia theory. [6]

They argue that microbes and viruses can exchange and acquire DNA, and this argument is supported by a recent study published in Nature Communications [7] which sheds light on how bacteria incorporate foreign DNA from invading viruses into their own regulatory processes.

Thomas Wood, professor in the *Artie McFerrin Department of Chemical Engineering* at Texas A&M University, explains how viruses replicate themselves by invading bacterial cells and integrating themselves into the chromosomes of the bacteria.

When this happens, a bacterium makes a copy of its

chromosome, which includes the virus particle. The virus can then choose at a later time to replicate itself, killing the bacterium.

Having already integrated itself into the bacterium's chromosome, the virus is subject to mutation as well.

The Black Death Revisited

The Black Death moved relentlessly northwards through Europe like a giant wave.

Its progress was very rapid in the early stages, from December 1347 to June 1348, when it spread through Italy and France, Spain and the Balkans. Crossing the Alps and Pyrenees, it eventually reached Sweden, Norway, and the Baltic by December 1350. Many villages were completely depopulated and disappeared, but the progression of the disease included zones of total avoidance as well.

The Black Death stayed in Europe for the next *three centuries*, disappearing finally in the seventeenth century in 1670 when it was apparently at the peak of its power.

Inspired by Black Death, The Dance of Death is an allegory on the universality of death

and a common painting motif in late medieval period.

Why did it appear, spread, and disappear as it did?

A new and unique virus formed under conditions facilitated by cosmic impacts could be lethal to a population that is not previously immunized (here, natural immunity is intended) against it. But as immunization is acquired within a population, the course of the disease or the disease itself can change.

There is compelling evidence that the Black Death was not an outbreak of bubonic plague, but was in fact

caused by a hemorrhagic virus.

This case is synthesized in the book Return of the Black Death [8], in which **Susan Scott** and **Christopher Duncan** from Liverpool University carefully put all the available clues together, tracking the plague from its first appearance out of nowhere and chronicling its unprecedented catastrophic effects on European civilization - death on a scale that is unimaginable, but could very well happen again, at any time.

Studying the parish records and the historical data registered in English provinces, using information about the critical events in the lives of real people and computer modeling, Duncan and Scott were able to not only surmise the amount of time from the appearance of symptoms to death, but also to establish the following facts about the pandemic:

> - An outbreak is recorded as being started by a traveler or stranger or by an inhabitant who had returned from a place where the plague was known to be raging.
>
> - The plague behaved in exactly the same way in each outbreak.
>
> - There were, however, two different types of epidemics in England, governed by size and density of the population.

- The full-blown typical epidemic lasted for eight or nine months - from spring to December.
- The mortality rate was often about 40% of the population, although they had no measure of how many people had fled at the first signs of trouble.

Not only that, they were also able to establish these vital statistics of the plague:

- Latent period: 10 to 12 days
- Infectious period before appearance of symptoms: 20 to 22 days
- Incubation period: 32 days
- Average period displaying symptoms before death: 5 days
- Total infectious period: about 27 days, assuming that the victim remained infectious until death, although it is possible that infectiousness decreased once the symptoms appeared
- Average time from the point of infection to death: 37 days

The authors were astonished when they were able to work out the duration of these statistics in more than 50 different plague outbreaks in England and to verify the length of the latent and infectious periods many times.

The correspondence with the universal 40-day "quarantine" period established as successful prophylaxis during the time of the plague supported their conclusions. From the data available in other countries, they argue convincingly that these statistics applied to the Black Death in all of Europe.

It was evident that the key to the success of the plague in the Middle Ages lay in its exceptionally long incubation period.

Every infectious disease has an incubation period which spans from the time when a person is infected to when the first symptoms appear, and an infectious period which is the time during which the person can transmit the infection to other people. The infection is followed by a latent period during which germs multiply until the victim becomes infectious.

If this latent period is shorter than the incubation period, an infected person will be infectious before the symptoms appear and he or she may unknowingly transmit the disease to others.

Eventually, the disease runs its course in the body and for the infection to persist, it must have infected at least one other person.

Among the plague symptoms there were accounts of the following:

- A victim usually displayed the symptoms for about five days before dying. But according to contemporary accounts, this period could have been between two to twelve days.

- The main diagnostic feature was the appearance of hemorrhagic spots, often red, but ranging in color from blue to purple and from orange to black. They often appeared on the chest, but were also seen on the throat, arms and legs and were caused by bleeding under the skin from damaged capillaries. These were so-called "God's tokens".

- Various swellings were also characteristic of the disease: carbuncles, blains (burning ulcers) and the the buboes, which were swollen lymph glands in the neck, armpits and groin. If the buboes failed to rise and burst, there was little chance of survival, but if they broke the fever apparently declined.

- Fever, continual vomiting, diarrhea, and prolonged bleeding from the nose were additional characteristics. Also, blood-tinged urine, a burning thirst, and in some, madness and delirium.

- Autopsies revealed generalized necrosis of the internal organs. It was surely a gruesome way to die. The victim was killed by the literal death and liquefaction of the organs.

Since nobody had been exposed to the disease before, almost everyone who made effective contact with an infectious person caught the disease and died, but there were reports of a few people who apparently had a natural protection against this new disease.

- Could their ancestors have been exposed to a similar plague in the past?
- Or did they carry particular mutations that made them immune or their immune system strong enough to fight such a disease?

Illustration of the Black Death

from the Toggenburg Bible (1411).

What about the bubonic plague?

Against all odds, the bubonic plague was universally and unequivocally believed to be the cause of the Black Death, despite the fact that it is well-established as biologically impossible.

Bubonic plague is a disease carried by rodents and its infection is transmitted to people from rats by fleas. The infectious agent is Yersinia pestis.

Some rats are highly vulnerable and die, whereas others are resistant and can survive an infection. This is a key concept, since the disease will die out if all rats are highly vulnerable, whereas it will persist in areas where there is a balance between susceptible and resistant rats.

Scott and Duncan explain how *Yersinia pestis* has never persisted in any European rodents because they are not resistant. In addition to that, the only species of rats in Europe came either some 60 years after the last European plague or could not survive without a warm climate, making it impossible to spread infection rapidly

and wildly in winter.

They argue that:

> ... it is known that the Black Death was carried across the sea to Iceland and that there were two severe and well-authenticated epidemics in the fifteenth century. [...] Yet it is known that no rats were present on the island during the three centuries of the Black Death.
>
> Infections continued through the winter when the average temperature was below -3 degrees Celsius, where transmission by fleas is impossible.
>
> It is also agreed that there is no mention in any of the accounts of rat mortality during the Black Death. A temperature of between 18 degrees and 27 degrees Celsius and relative humidity of 70% are ideal for flea egg-laying, whereas temperatures below 18 degrees inhibit it.
>
> Researchers had collected all the available climatological data for central England during the Black Death and at no time was the average July-August temperature above 18.5 degrees Celsius.
>
> Britain, much less Iceland or Sweden, did not have a climate capable of sustaining regular seasonal outbreaks of flea-borne bubonic plague.

Right from the beginning, the people of medieval Europe

realized that it was an infectious disease spread directly from one person to another, not a disease associated with, or coming from, rats.

There are two forms of bubonic plague in humans: bubonic and pneumonic. Patients with bubonic plague are not contagious to other people. Pneumonic plague is contagious, appearing in about 5% of cases of bubonic plague; that is, it cannot occur in the absence of the bubonic form and it cannot persist independently. It happens when the bacterium reaches the lungs, and the time from infection to death of bubonic/pneumonic plague is 5 days, not 37 days.

Scott and Duncan note certain factors that narrow the causative agent of the Black Death down to a virus.

The infectious agent also appeared to have been remarkably stable; if there were mutations, these didn't change the course of the disease, at least not for 300 years. The plague was believed to have been passed by droplet infection; it was considered to be safe if one kept at least 4 meters (13 feet) away from an infected person out-of-doors.

Most interesting of all, there exists a strong genetic selection among European populations in favor of the CCR5-Δ32 mutation. This mutation results in the genetic deletion of a portion of the CCR5 gene which codes for a protein that is an entry port used by some viruses.

This mutation makes a homozygous carrier resistant to HIV-1 virus infections, and may have made them resistant to the Black Death.

No known virus existing today is responsible for the Black Death, although the symptoms resemble those of Ebola, Marburg and the viral hemorrhagic fevers - diseases caused by filoviruses. They have a high mortality rate and tend to occur in explosive epidemics driven by person-to-person transmission. Outbreaks occur unpredictably and, as of yet, no animal reservoir is known.

Similar plagues have been described in antiquity, i.e. the devastating epidemic that struck Athens in 430 BC and which Joseph and Wickramasinghe suggest the causative agent of which to be cometary as well.[9]

As with the Black Death, the epidemic in Athens was localized geographically, it declined and disappeared as abruptly as it had started, and no known current disease fits its description by the historian **Thucydides**.

A scene showing monks, disfigured by the plague, being blessed by a priest. England, 1360–75.

Where did these diseases go? Did the Black Death virus mutate, causing other fearsome diseases?

What we do know is that a more virulent form of smallpox came to the fore in the 1630s and, just as the Black Death *disappeared* from the stage of history, smallpox took its place as the most feared of human diseases. We can only speculate.

Smallpox virus, as opposed to the causative agent of the

Black death, is very resistant to cold temperatures, making it a more viable virus.

According to the data collected by Scott and Duncan which describe the disease process of the Black Death, hemorrhagic smallpox is almost virtually identical to the Black Death.

But were there cometary impacts at the time of the Black Death?

If you read the special feature of *The Dot Connector Magazine* issue 11, (see also The Golden Age, Psychopathy and the Sixth Extinction) you probably know the answer to be positive.

Plague outbreaks often coincided against a background of food shortages, famines, flooding, peasant uprisings and religious wars. In certain countries, there were volcanic eruptions, earthquakes and famines. And not only did the plague outbreaks coincide with cometary impacts, but earthquakes themselves may well have been indications of cometary impacts.

Dendrochronologist **Mike Baillie** of Queen's University, Belfast, Ireland makes this case in his book *New Light on the Black Death - The Cosmic Connection*. [10]

Baillie compared tree rings to dated ice-core samples that had been analyzed, discovering ammonium. Now, there is a connection between the ammonium in the ice cores and extra-terrestrial bombardment of the surface of the Earth on at least four occasions in the last 1500 years:

> - 539
> - 626
> - 1014
> - 1908 - the Tunguska event

Baillie shows that the exact same signature is present at the time of the Black Death in both the tree rings and in the ice cores, but also at other times of so-called "plagues and pandemics".

Baillie points out that earthquakes could be caused by cometary explosions in the atmosphere or even by impacts on the surface of the earth. In fact, the ammonium signal in the ice-cores is directly connected to an earthquake that occurred on January 25th, 1348.

He correlates this with accounts of the 14th century that the plague was "corruption of the atmosphere" that came from this earthquake.

Comet of 1681.

The concept of astral bodies grazing the Earth's atmosphere or impacting Earth directly, depositing microbes and viruses on Earth which may combine with Earthly microbes producing new strains of viruses and contributing to evolution and diseases, is daunting to say the least.

What can we possibly do to counteract such infectious threats? Could dietary changes influence the appearance and disappearance of diseases?

We know that the period between c. 500 and 1300 saw a major change in diet that affected most of Europe, a period preceding the Black Death. More intense

agriculture on ever-increasing acreage resulted in a shift from meat to various grains and vegetables as the staple of the majority of the population.

Meat was more expensive and therefore more prestigious and, usually in the form of wild game, was common only on the tables of the nobility which, according to some of the accounts, was hardly affected by the Black Death.

So it very well may be that meat consumption is a nutritional protection against diseases of various kinds, including the Black Death (the Paleolithic archaeological record certainly supports this idea).

We know that grains are sources of gluten, a protein which is quite difficult to digest and to which increasing numbers of people are intolerant due to its modern hybridization for industrial purposes. Anti-nutrients such as lectins in grains are known to be toxic.

The lectin of wheat is known to be pro-inflammatory, immunotoxic, neurotoxic, cytotoxic, cardiotoxic and may interfere with gene expression, disrupt endocrine function, may adversely affect gastrointestinal function and - surprise - lectins share pathogenic similarities with certain viruses.[11]

A *population with bread as a staple food is unquestionably susceptible to disease and, ultimately, pandemic*. As it was then, we are nowadays just as

vulnerable due to the industrialization of our food supply.

Nutritionally deficient foods, plus widespread cereal consumption, added to the overwhelming toxicity of our environment (heavy metals, fluoride, toxic additives in foods, etc), have prepared us as the perfect population for destruction by *the return of the Black Death*.

References

1. Chandra Wickramasinghe, Milton Wainwright & Jayant Narlika. SARS - a clue to its origins? The Lancet, vol. 361, May 23, 2003, pp 1832.

2. Daniel P. Glavin, Andrew D. Aubrey, Michael P. Callahan, Jason P. Dworkin, Jamie E. Elsila, Eric T. Parker, Jeffrey L. Bada, Peter Jenniskens & Muawia H. Shaddad. Extraterrestrial amino acids in the Almahata Sitta meteorite. Meteoritics & Planetary Science, vol. 45 (10-11), October/November 2010, pp 1695-1709.

3. Rhawn Joseph Ph.D, Rudolf Schild Ph.D. & Chandra Wickramasinghe Ph.D. Biological Cosmology, Astrobiology, and the Origins and Evolution of Life. Cosmology Science Publishers, 2010.

4. Ganapathy, R. The Tunguska explosion of 1908 - Discovery of meteoritic debris near the explosion site

and at the South Pole. Science, vol. 220, June 10, 1983, pp 1158-1161.

5. Rina S. Andreeva, Alexander I. Borodulin, et al. Biogenic Component of Atmospheric Aerosol in the South of West Siberia. Chemistry for Sustainable Development, 10, 2002, pp 532-537.

6. Chandra Wickramasinghe. Life from space: astrobiology and panspermia. February 2009. The Biochemical Society. http://www.panspermia.org/biochemistfeb09.pdf

7. Xiaoxue Wang, Younghoon Kim, Qun Ma, Seok Hoon Hong, Karina Pokusaeva, Joseph M. Sturino & Thomas K. Wood. Cryptic prophages help bacteria cope with adverse environments. Nature Communications, vol. 1 (9), 2010, pp 147.

8. Susan Scott & Christopher Duncan. Return of the Black Death: The World's Greatest Serial Killer. Wiley, 2004.

9. Rhawn Joseph, Ph.D. & Chandra Wickramasinghe, Ph.D. Comets and Contagion: Evolution and Diseases From Space. Journal of Cosmology, vol. 7, 2010, pp 1750-1770.

10. Mike Baillie. New Light on the Black Death: The

Cosmic Connection. Tempus, 2006.

11. Sayer Ji. Opening Pandora's Bread Box: The Critical Role of Wheat Lectin in Human Disease. Journal of Gluten Sensitivity, Winter 2009.

Return to Asteroids, Comets and Meteorites

Return to Viruses - An Instrument in World Depopulation